

RUNNING HEAD: HUMOR IN FRIENDSHIPS

Laughing together:

The relationships between humor and friendship in childhood through to adulthood

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Introduction

The 'humor styles' approach assumes that humor can be adaptive and maladaptive, with four main styles reflecting how we use humor in every-day life: Affiliative, Self-enhancing, Self-defeating, and Aggressive. In this chapter we present findings from several studies, with children, adolescents, and adults, all exploring the associations between the four humor styles and different aspects of friendship. It is argued that the different styles of humor have an important influence on our social relationships. For example, affiliative humor may be used by children to maintain their friendships. It is enjoyed and valued by others and so its use can add to children's ongoing popularity and acceptance. Furthermore, humor increases in comfortable social settings, providing peer accepted children with further opportunities to become skilled in their use of adaptive humor. We examine associations between humor and different facets of friendships, such as number of friends, friendship quality, and skills in initiating relationships, and provide evidence of a reciprocal relationship between humor and friendship. We further examine research on cultural influences on the links between humor styles and friendship relations.

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Friendship involves mutual affection between two people and there is a wealth of evidence that friendships from childhood through to adulthood are important for our general well-being and quality of life. In the same way, humor has been identified as critical for our mental health; one reason for this is because of the role humor plays in enhancing our relationships with others, which provide much needed social support (Martin & Ford, 2018). Humor is essentially a social phenomenon; we tend to joke and laugh more often when we are in the presence of other people, compared to when we are alone (Shiota et al., 2004). It is important in our relationships with others, including in our social groups, where it can be used to: communicate group norms, reinforce group status, exclude people from groups, and foster group cohesion and identity (e.g. Robinson & Smith-Lovin, 2001). It is also important for our close relationships, including intimate romantic relationships and friendships. For example, humor can be used to aid communication and ease tensions when two people are in disagreement; it can help to enhance one's relationships, leading to feelings of closeness (Long & Graesser, 1988). It is often used as a source of information that contributes to our overall impression of others, with a good sense of humor being perceived as a highly desirable characteristic, and often used as a guide when choosing friends and romantic partners (Sprecher & Regan, 2002). Thus, humor is important in the formation, functioning, and maintenance of close relationships. This chapter will focus on the relationships between humor and friendship in childhood through to

adulthood. We look at research linking humor to friendships across the lifespan, and review evidence of a reciprocal relationship between humor and friendships.

Humor Styles

Research by Martin et al. (2003) suggests that there are *four* main types of humor: two are adaptive and two are maladaptive. To measure these types of humor, Martin et al. (2003) developed the Humor Styles Questionnaire (HSQ), with four dimensions reflecting the use of humor in everyday life. Self-enhancing humor is used to enhance the self, but is not detrimental to others (e.g. 'My humorous outlook on life keeps me from getting too upset or depressed about things'). Aggressive humor on the other hand, while enhancing the self, at least in the short-term, is done at the expense of others (e.g. 'If someone makes a mistake I often tease them about it'). Over the long-term, this style is believed to be detrimental to the self because it tends to alienate others (Martin 2007). Affiliative humor enhances one's relationships with others and reduces interpersonal tensions (e.g. 'I enjoy making people laugh'). Self-defeating humor, largely untapped by previous humor scales, is used to enhance one's relationships with others, but at the expense of denigration of the self (e.g. 'I often try to make people like or accept me more by saying something funny about my own weaknesses, blunders and faults'). Although individuals who use this style of humor might be seen as fairly 'witty' and 'amusing' ('class clowns'), it is thought to reflect an underlying emotional neediness and low self-esteem (Martin et al., 2003). A distinction also needs to be made between self-defeating humor and 'self-deprecating humor'. The latter is used by individuals who gently poke fun at their own faults and do not take themselves too seriously (Martin et al., 2003). They may then be

perceived by others as more likeable and less threatening. Self-defeating humor, in contrast, involves a more excessively disparaging type of humor.

Much stronger correlations between humor and psychological adjustment have been found when using the HSQ compared to previous research (see Martin & Ford, 2018); this may be because prior studies used measures that did not distinguish between adaptive and maladaptive forms (Martin et al. 2003, p. 50). For example, affiliative and self-enhancing humor are typically found to be negatively correlated with anxiety and depression and positively correlated with self-esteem. In contrast, self-defeating humor is associated with high levels of anxiety and depression and with low self-esteem (Kuiper et al. 2004; Martin et al. 2003). Aggressive and self-defeating humor styles are both linked with hostility and aggression (Martin et al. 2003). In support of Martin's theory about the consequences of adopting an aggressive humor style (above), studies have found that aggressive humor is not associated with psychological adjustment but is strongly negatively correlated with *social* adjustment measures (e.g. Kuiper et al. 2004; Yip & Martin 2006). For example, Yip and Martin (2006) found that the two positive styles of humor were positively correlated with initiating relationships and personal disclosure, and aggressive humor was negatively correlated with managing conflict and providing support to others; those scoring high for self-defeating humor were more likely to report difficulties in asserting their personal rights to others.

Klein and Kuiper (2006) were first to propose that the four humor styles approach (Martin et al., 2003) should be considered with respect to children as well as to adults, since children can also use humor within their social interactions. They proposed that each humor style might relate to children's peer relationships in either a positive or negative way. Firstly, as

affiliative humor is described by Martin et al. (2003) as being a benign use of humor used to enhance relationships, it may be seen as desirable and enjoyed by others and could therefore make a child stand out to others as a potential friend. Subsequently, in friendships where children feel comfortable, they may then have further opportunities to practice and develop their positive humor use.

Klein and Kuiper (2006) suggested that self-enhancing humor can result in increased feelings of self-worth which could lead to positive evaluations by others and perhaps in turn, the formation of friendships. Conversely, children who use self-defeating humor may reflect feelings of low self-worth or neediness which would likely be an unappealing characteristic in a friend. Klein and Kuiper (2006) proposed that children who have been victimised or those who have not been able to enjoy safe social situations which enable the development of positive uses of humor, may resort to using self-defeating humor to gain acceptance from others. It can therefore be argued that having a lack of comfortable friendships may encourage children's use of more harmful forms of humor. Lastly Klein and Kuiper (2006) argue that aggressive humor may be a form of humor utilised by bullies. They suggest that whilst more socially skilled bullies may use aggressive humor to victimise other children in a way which is not always viewed negatively, direct bullies may use aggressive humor to overtly make fun of others. It could therefore be that these more direct uses of humor may be detrimental to children's position in their peer group and therefore the number of friends they may have. With these hypotheses in mind, we turn now to review research on three age groups with respect to humor styles and peer relations (a) adults, (b) adolescents and (c) children.

Humor Styles in Adult Close Relationships

It appears that in adults, more research has been conducted to investigate the role of humor styles in intimate and romantic relationships, as opposed to friendship. This is in contrast to research which has examined children's use of humor, as will be seen later in the chapter. For example, affiliative humor is associated with greater relationship satisfaction, while aggressive and self-defeating humor are linked with lower relationship satisfaction (Caird & Martin, 2014). Using an experimental design, with vignettes about a potential romantic interest, it was found that participants were more likely to indicate a preference for a long-term relationship with those using the positive styles of humor (DiDonato, Bedminster, Machel, 2013). Ziegler-Hill, Besser, and Jett (2013) proposed that the different styles of humor send very different (implicit) signals to the social environment and provided evidence that adult (potential romantic) targets displaying the more benign styles of humor are perceived more positively by others. Similarly, Kuiper et al. (2010) found that both adolescents and adults are less willing to continue an interaction with someone displaying maladaptive humor; in addition, these forms of humor led to less positive and more negative feelings in recipients. Thus, it is likely that humor is not only important in our intimate and romantic relationships, but also our friendships.

In our research (Blunn & Fox, unpublished) we investigated the association between the four humor styles and interpersonal competence, in particular, emotional support giving and initiating relationships, which are important features of interpersonal relationships (romantic relationships and friendships). We took a similar approach to Yip and Martin (2006), but instead, we looked at differences in *humor types*. More recently, research has started to

examine combinations of humor styles (humor types), as opposed to viewing humor styles individually. Research has questioned if studying combinations of humor styles will produce new associations with psychosocial adjustment variables, which cannot be viewed when examining humor styles in isolation.

Galloway (2010) provided a new insight into humor research by identifying clusters of individuals classified by the HSQ. He investigated the association between the Big Five personality, self-esteem and humor types with 318 Australian participants. A cluster analysis was performed to categorise each participant according to their HSQ score. Four clusters were identified. Cluster one comprised individuals who scored above average on each humor style and cluster two identified those who scored below average on each humor style. Cluster three were those above average on the positive styles, and below average on the negative styles. Finally, cluster four identified individuals who scored above average on the negative styles and below average on the positive ones. Upon identifying clusters, associations were found between humor types and the adjustment variables. For instance, individuals in cluster one scored above average on openness and extraversion, and below average on conscientiousness and agreeableness. Those in cluster four scored below average on self-esteem, openness, extraversion, and agreeableness. It was concluded that studying humor styles by simple correlations is uninformative, particularly in identifying specific patterns that characterize a group of individuals.

Previous research has identified cultural differences in humor styles. Chen and Martin (2007) found cross-cultural differences in humor styles of Chinese and Canadian participants.

For example, it was found that Chinese participants used less aggressive humor than Canadian participants and generally, Canadian participants used all four humor styles more than the Chinese sample. Furthermore, research into humor types has identified different clusters in each different country. For instance, Galloway (2010) identified four humor types on Australian participants, Leist and Müller (2013) identified three humor types on German participants and Fox et al. (2016) identified four different clusters on a UK child sample (as will be discussed later).

In our study (Blunn & Fox, unpublished), participants were 438 adults in the UK aged 18-65 years with a mean age of 27.01 years ($SD = 11.85$). The sample ($N = 434$) consisted of 321 (73.3%) females and 112 (25.6%) males. Participants completed the Humor Styles Questionnaire (Martin et al. 2003), and social competency was measured using the Interpersonal Competence Questionnaire (Buhrmester, Furman, Wittenberg, & Reis, 1988). A modified version was used, including two subscales: emotional support giving and initiating relationships.

A cluster analysis was conducted in order to categorise individuals according to their HSQ scores. A k-means cluster analysis was performed, as previously used by Galloway (2010) and Leist and Müller (2013) and four clusters were identified as the optimal solution. The first cluster identified was the 'Self-Defeaters' ($N=105$). This cluster includes those who scored above average on self-defeating humor but below average on the other three humor styles. The second cluster was the 'Humor Deniers', individuals scoring below average on all four humor styles ($N=57$). Cluster three was named as 'Humor Endorsers', those who scored above average

on all four humor styles (N=109). Finally, cluster four was the 'Adaptive Humorists' (N=161). This includes those who scored above average on the adaptive humor styles, and below average on the maladaptive humor styles.

Adaptive Humorists scored higher for initiating relationships than the other three clusters. In addition, Humor Endorsers scored higher on initiating relationships than the Self-Defeaters. In addition, the Adaptive Humorists scored higher for emotional support giving in comparison to the other three clusters. However, the Self-Defeaters scored higher on emotional support giving compared to the Humor Endorsers. Our study supports the assumption that examining combinations of humor styles produces new associations with psychosocial adjustment variables, which cannot be viewed when studying humor styles in isolation. Crucially, we should not assume that self-defeating humor is always maladaptive. The present findings suggest the negative effects of self-defeating humor can be offset when used in combination with positive humor styles. Thus, this research advances our understanding of humor types and psychosocial adjustment and has significant implications for humor research.

Despite the Self-Defeaters scoring low on relationship initiation, they did not score particularly low on emotional support giving. Indeed, they scored higher than Humor Endorsers on this variable. It has been suggested that those with the self-defeating humor style are identified as having low feelings about themselves while at the same time trying to ingratiate themselves with others at their own expense (Martin et al. 2003). Furthermore, Martin et al. (2003, p. 54) described those who use self-defeating humor as having an "emotional neediness". Thus, this finding may be due to their "emotional neediness", perhaps reflecting a

greater awareness of the emotional needs of themselves and others. This potential *strength* of those using self-defeating humor is worthy of further investigation.

Interestingly, the findings of the present study show that the Humor Endorsers have a higher mean score for self-defeating humor compared to the 'Self-Defeaters'. Despite the Humor Endorsers scoring highly on self-defeating humor, they appear to be fairly well adjusted, at least in terms of initiating relationships. Therefore, this suggests that adjustment is not determined by how much self-defeating humor an individual engages in, but whether or not it is used in isolation.

In summary, research with adults using the Humor Styles Questionnaire has found evidence that humor is important for the formation and maintenance of interpersonal relationships. Martin and Ford (2018) explained that positive styles of humor may be related to better mental health because adaptive styles of humor can lead to satisfying personal relationships, which have been found to be linked with better mental health. However, there is a need for future research to examine the role that humor plays in adult friendships, as well as in intimate romantic relationships, given the importance of both types of relationships for our mental health.

Humor Styles and Friendships in Adolescence

Research on young people's use of humor started with looking at adolescent humor styles. In adolescents, in particular, humor is considered an important facet of friendships. A recent study of early adolescents, by Wagner (2019), asking about characteristics of good friends, found humor was one of the most desirable and central qualities cited. The question of what constitutes humor in adolescence has been at the centre of studies by psychologists

writing in this area. Researchers have found conversely that as much as humor can be an ingredient for good friendships, adolescent humor styles can also be associated with bullying and unhealthy friendships. Since involvement in bullying as a target, perpetrator, or witness is also yoked to low popularity and low peer acceptance, it is important to disentangle humor that helps maintain versus humor that destroys friendships. In the following section, the links between humor and friendship in adolescence are explored, both as a building block and a wrecking ball of adolescent friendships.

Building Adolescent Friendships

The notion of ‘being funny’ is seen to be socially desirable in several ways in adolescence (Masten, 1986; Sanford & Eder, 1984). For example, Sanford and Eder (1984) reported that humor helped adolescents to make new friends, share information about social norms and to reinforce existing friendships. Cross-sectional studies have shown associations between peers’ use of humor, popularity and peer liking (Closson, 2009; Masten, 1986; Vaillancourt & Hymel, 2006).

When it comes to research on humor styles, it is affiliative humor in adolescence that has been linked most thoroughly to healthy friendship development. Research shows that there are strong links between affiliative humor and mental wellbeing. Kuiper, Kirsch and Leite (2010), mentioned briefly earlier, looked at responses to comments grounded in each of the four humor styles identified by Martin et al. (2003) using the Reactions to Humorous Comments Inventory. This includes comments such as: “A friend makes a positive humorous comment to help maintain group morale” (affiliative humor style); “A friend makes a positive, humorous comment to cheer him/herself up” (self-enhancing humor); “A friend makes a humorous

comment that puts down another person in the group” (aggressive humor) and “A friend gets carried away in making humorous comments that are self-critical” (self-defeating humor). For each humorous remark, respondents rated the extent to which they would want to remain networked with a friend who used that type of humor. The findings, from 132 older adolescents, were that they would be more likely to remain friends with someone who used affiliative or self-enhancing humor over someone using aggressive or self-defeating humor. They would be least likely to stay friends with someone using aggressive humor. These researchers also demonstrated that affiliative humor-based remarks left recipients feeling better about themselves. In their study, too, Fox et al. (2013) reported that adopting an affiliative humor style was positively linked with self-perceived social competence.

Adolescence arguably brings with it a whole host of physiological and psychological challenges and increased experience of stress. Accordingly, researchers have looked at ways in which humor can mitigate against the stress experienced in adolescence and help young people to cope with the challenges in this period of their life, and this often includes drawing on social support (Erikson & Feldstein, 2007). For example, Führ (2002) found greater use of humor among 11-12 year old girls to cheer themselves up when they found themselves in uncertain situations. Relatedly, Freiheit, Overholser and Lehnert (1998) discovered that adolescents who used humor to cope with stressful situations described fewer symptoms of depression. Erikson and Feldstein (2007) showed that among 12-15 year olds, self-enhancing humor was positively correlated with approach-based coping strategies. In a similar vein, Falanga, De Caroli and Sagone (2014) found significant correlations between perceived empathy, prosocial tendencies and self-enhancing humor. Similarly, Karakuş, Ercan and Tekgöz (2014) found significant

positive correlation between self-enhancing humor and perceived social support in their sample of high school students in Turkey.

In spite of strong links between humor styles and friendships, the research discussed so far has been cross-sectional in nature, considering a sample of adolescents at one point in time. One of the first studies to look at the relation between humor styles in adolescence and peer relationships longitudinally was one of our own (Fox, Hunter & Jones, 2015; 2016a). This paper reports a longitudinal study of 1234 adolescents aged 11-13 years (52% female) sampled from six English high schools. This study had two data collection points during the autumn and spring of a single academic year. At both time points, children completed the humor styles questionnaire, alongside self-report measures of peer acceptance, bullying behaviors, loneliness, depression and self-esteem. They also completed peer reports of peer acceptance and of bullying behaviors. Self reports and peer reports reflect different information, with self reports giving more subjective self-perceptions and peer reports being more indicative of someone's social reputation (Juvonen & Graham, 2001).

Another way to look at the role of affiliative humor is to consider its effects on a friendship dyad over time. Friendship dyads are likely to become more similar over time (Aboud & Mendelson, 1996). This effect is thought to be because adolescents choose friends who are similar to them whilst at the same time leaving friendships where significant differences exist (Van Zalk, Kerr, Branje, Stattin & Meeus, 2010). It is thought that this convergence over time is positive and enhances adolescents' friendship quality. A further analysis of our longitudinal data involved examination of 87 best-friend dyads (see Hunter, Fox & Jones, 2016). They looked at the degree to which humor was shared by these dyads, for changes over time, and whether

the humor styles of each member of a best-friend dyad influenced the other member's future humor use. Hunter et al.'s results indicated that the high school students in their sample did not share humor styles in the autumn, but, by the spring, levels of affiliative humor were positively linked. Conversely, no other humor styles were significantly linked within dyads in autumn or spring. Research with adults suggests that adaptive humor styles are socially advantageous (Cann & Matson, 2014) and the results Hunter et al. presented point to this to being the case for affiliative humor use in adolescents.

Decimating Adolescent Friendships

Just as affiliative and self-enhancing humor styles make it easier for adolescents to bond and build friendships, research attention has also been paid to self-defeating humor as something which may impede healthy friendship development. Dyck and Holtzman (2013) found a lack of social support mediated the association between self-defeating humor and depressive symptoms in adults. In the same vein, Falanga et al. (2014), in a sample of 302 Italian 14-19 year olds, found low levels of self-defeating humor. Nonetheless, it was present in boys in this sample more than in girls, as an attempt to improve their social standing. Klein and Kuiper (2006) proposed paths between children's peer relations and the different humor styles. Specifically, they hypothesized that children who are rejected by their peers would receive fewer opportunities to practice humor use, so may be at a disadvantage in terms of their developing humor competence. As a result, they may gravitate towards self-defeating humor, as a means of getting other children to be friends with them. However, in their view, self-defeating humor represents low self-worth and an inherent neediness. Thus, rather than

facilitating one's interpersonal relationships, it serves to ostracise others. Relatedly, Fox, Dean and Lydford (2013) found in their study that self-defeating humor was positively linked to depression and anxiety and was associated negatively with global self-worth and self-perceived social competence. The other maladaptive humor style is aggressive humor. An association between aggression and popularity is well documented in the literature. With this in mind, researchers have turned their attention to why this may be the case and have considered the mediating role of humor. For example, a study by Bowker and Etkin (2014) of 265 11-12 year olds showed that relational aggression was linked to popularity indirectly through humor. In this regard, physically aggressive adolescents are seen by their classmates as possessing a good sense of humor (Dodge & Coie, 1987). Further to this, Mishna et al. (2010) found that adolescents explain their bullying of others online as an attempt to feel popular, powerful and funny.

In their aforementioned longitudinal study, Fox et al. (2015) reported bi-directional associations supporting Klein and Kuiper's (2006) hypotheses. In particular, they demonstrated a vicious cycle between the use of different humor styles and peer victimization. That is, peer victimization was correlated with a decrease in affiliative humor use and with greater later use of self-defeating humor. At the same time, more self-defeating humor use was related to more peer victimization, whereas affiliative humor use was associated with less peer victimization over time. Turning to the vicious cycle, self-reported peer victimization was reciprocally linked to self-defeating humor, whilst affiliative humor formed bidirectional relationships with peer nominations for peer victimization.

It is also worth noting that there are gender differences in use of maladaptive humor in friendships. In this regard, Fox, et al. (2013) showed that boys reported higher levels of aggressive humor than girls. This mirrors the research literature, which shows that boys are more verbally and physically aggressive than girls (see Underwood 2003). Connolly et al. (2015) moved beyond looking at friendship, to look at humor use in same-sex best-friend dyads and romantic (heterosexual) partnerships in adolescence. They used observational methods with 37 female best friends, 22 male best friends and 37 romantic couples. They showed that male best friend dyads were less affiliative than female best friend dyads or romantic partnerships, and that female best friend dyads were less aggressive compared with male best friend dyads. This study points to the ways in which humor is used differently between genders and across various friendship 'categories.' It also indicates that, on the one hand, there is not simply a clear correlation between maladaptive humor and dysfunctional friendships and, on the other hand, between adaptive humor and healthy friendships, and this warrants further research attention.

In summary then, research on links between humor styles and friendships in adolescence suggests that there are ways in which affiliative and self-enhancing humor may build friendships, whilst maladaptive humor styles may perpetuate a cycle of peer victimization. There is also evidence of gender differences in adolescent humor styles use. These associations have been demonstrated in both cross-sectional and longitudinal research. Nonetheless, these data are largely from Western countries, and studies have not to our knowledge examined the role of culture in this age group: this will likely be a fruitful avenue for future research.

Humor and Friendships in the Elementary Years

Although little research has been conducted on the social functions of humor in children, it is believed that during middle childhood humor may be important in socialisation, forming and maintaining peer groups, influencing social status and enforcing norms (Martin & Ford, 2018).

As discussed previously, Klein and Kuiper (2006) were first to propose that the four humor styles approach (Martin et al., 2003) should be considered with respect to this age group, a period whereby they also state that children can utilise humor within their social interactions.

Based on Klein and Kuiper's (2006) ideas, we investigated associations between humor styles, loneliness and number of mutual friendships with 225 children aged 8-11 years from one primary school in England (James & Fox, 2016a). As well as completing the Humor Styles Questionnaire for younger children (HSQ-Y), which is a measure of all four humor styles suitable for those aged 8-11 years, a four-item, self-report measure of Loneliness and Social Satisfaction (Asher, Hymel & Renshaw, 1984; Rotenberg, Boulton & Fox, 2005) was also administered.

Although it may be that there are individual differences in children's use and understanding of the self-directed humor styles in the primary aged group (James & Fox, 2016b), we argued that children may be fairly competent reporters of their own humor use (James & Fox, 2016a).

Children were then provided with a class list and asked to tick the names of their closest friends. For the maladaptive humor styles, significant associations were not found. Both adaptive humor styles on the other hand were found to be negatively associated with loneliness. Likewise, for number of mutual friendships a significant positive correlation was found with affiliative humor whilst a positive correlation approaching significance was found for

self-enhancing humor. As Klein and Kuiper (2006) suggested, affiliative humor may be enjoyed and valued by other children. It is therefore understandable why those able to utilise this friendly form of humor would have a number of friends and also therefore avoid feelings of loneliness. Similarly, children who utilise self-enhancing humor to maintain a positive mood may be appreciated by their peers meaning friendships are more likely to be formed and maintained.

To explore associations between humor and friendship across time, we conducted a longitudinal study to investigate relationships between children's humor styles and psychosocial adjustment from the School Autumn to Summer term (James & Fox, 2018). On this occasion, at both time points, 413 children aged 8-11 years were asked complete the HSQ-Y and to write down the names of their closest friends in their class (see Parker & Asher, 1993). Whilst it is acknowledged that children may have friends outside of their class, this allowed for reciprocal friendships to again be considered. Structural equation modelling was used to examine proposed relationships between humor styles and adjustment over time. Although bidirectional associations were not found in this age group, number of friends in the autumn term was found to predict an increase in use of affiliative humor in the summer term. This suggests that children who have multiple friendships may have plentiful opportunities to practice using affiliative humor and could therefore become proficient in its use.

In addition to exploring associations between humor styles and number of friends, we believed it necessary to consider the nature of children's friendships. We therefore explored cross sectional associations between the four humor styles and aspects of friendship quality with junior aged children (James & Fox, 2016a). We predicted that those using the adaptive

humor styles would have better quality friendships than children using the more maladaptive humor styles. Alongside the HSQ-Y, selected subscales from Bukowki, Hoza and Boivin's (1994) Friendship Qualities Scale were also administered to a sample of 161 children. Participants were asked to think of their closest friend and respond by indicating to what extent they agreed or disagreed with nine statements measuring Closeness and Conflict within the friendship.

Findings showed that for conflict in friendship a significant, negative correlation was found with self-enhancing humor. We propose that perhaps a child who is able to manage their problems using humor and maintain a positive outlook, may find it easier cope with issues which could in other cases lead to arguments. In contrast, both aggressive and self-defeating humor were found to be positively correlated with conflict in friendship. In an attempt to explain the significant findings for aggressive humor, we noted the suggestions of Yip and Martin (2006) who proposed that users of maladaptive forms of humor could struggle with difficulties such as perceiving the feelings of others. When using aggressive humor this could lead to boundaries of what is considered appropriate being crossed which could in turn result in conflict or prevent friendships from becoming close. It can also be noted that in support of research with adults, children using maladaptive humor styles may be perceived more negatively and therefore not be considered as a potential candidate for a friend. James and Fox (in press) found when presented with a description of a child using aggressive humor, children rated the child significantly lower in terms of whether they would wish to be friends with them. It could be for example that children fear becoming the recipient of teasing or ridicule themselves. In comparison those described as using the adaptive humor were rated more highly on this

question. From this we can suggest that a child's use of humor may act as an important signal to others who may be considering whether they wish to form a friendship with that child.

To explain the association between self-defeating humor and conflict in friendship (James & Fox, 2016a) we argued that children could become frustrated by feeling a need to provide reassurance to friends who use humor to put themselves down or to draw attention to their flaws. In support of this, James and Fox (2016b) conducted a qualitative study using interviews to explore use and understanding of self-defeating and self-enhancing humor in children aged 9-11 years. In this study a child suggested that making fun of themselves does not make other children laugh, but instead leads to their comments being refuted by others. Similarly, the view was also portrayed that laughing at the expense of yourself is not something you should have to do within a "true friendship".

For closeness in friendship, significant positive correlations had been predicted for both adaptive humor styles but were not found. A significant negative relationship was however discovered between aggressive humor and closeness supporting the ideas above. The lack of significant associations for the adaptive humor styles were surprising given that Martin et al. (2003) found associations between the adaptive humor styles and intimacy with adult participants. Perhaps for younger children these associations may take longer to develop. It should also be acknowledged here that other key aspects of friendship quality including companionship, help and security remain so far unexplored. Exploring these would be an interesting avenue for future research with any age group, particularly using a longitudinal design.

Lastly, as discussed previously in this chapter, it is possible to also look at humor types by using cluster analysis to identify the combination of humor styles an individual might utilise. In our research exploring associations between humor styles and adjustment we also investigated humor types and identified three clusters with junior aged children (James, 2019). The clusters were adaptive humorists, those who scored above average on the adaptive humor styles, humor endorsers, those who scored above average on all humor styles and finally humor deniers who scored below average on every humor style. Further analysis showed that compared to the humor endorsers and adaptive humorists the humor deniers were lonelier and had less friends. These findings seem to demonstrate the importance of acknowledging that we may rarely use just one form of humor. It could also be argued that use of adaptive humor styles in conjunction with maladaptive styles could work as a protective factor against negative outcomes (Fox, Hunter & Jones, 2016b). Here it seems that those who utilise the least humor overall are those who may have the least friends.

In summary, the above research suggests that there may be associations between humor use and the number and quality of friendships children have. Notably, associations between the adaptive humor styles and number of friends were found and findings of a short-term longitudinal study suggested that having friends may lead to opportunities over time to increase use of affiliative humor. For the maladaptive humor styles, significant associations were found with conflict in friendship suggesting that use of these humor styles could be related to friendships which are poor in quality. Overall, it is acknowledged that humor styles in this age group may still be in development and that associations with aspects of friendship may become more apparent over time.

Conclusions

In this chapter we have reviewed research that has examined the links between humor and friendships from childhood through to adulthood. Research with adults has focused more generally on close relationships, particularly intimate (romantic) relationships and characteristics that are associated with high quality relationships such as emotional support giving. Our own research, using the humor styles approach and different humor 'types' showed that adaptive humor is typically associated with positive relationship qualities, compared to maladaptive humor. However, this does very much depend on how individuals use the humor styles in combination. Research on humor use in adults could extend this research to look more specifically at use of humor in adult friendships. Research with adolescents has shown the positive and negative implications of humor for adolescents, both in terms of the formation and maintenance of their friendships and their risk of being bullied. Longitudinal data has helped to shed light on the causal links, with evidence that use of affiliative humor can serve to protect children from the experience of bullied and that the experience of being bullied can affect children's use of affiliative humor. This provides support for the assertions of Klein and Kuiper (2006) about the role that children's peer relationships play in the development of children's humor (i.e. they are key socialization contexts). Finally, our research with elementary school children provides further support for these ideas, with evidence that children with lots of friends show an increase in their use of affiliative humor over time. The results reviewed here suggest that generally, positive humor styles should be encouraged in everyday life since they are adaptive for our relationships with others. In addition, negative humor styles are generally maladaptive for psychosocial well-being. In particular, relying on self-defeating humor alone is

detrimental and should not be encouraged. Nevertheless, it should not be assumed that self-defeating humor is always maladaptive since the negative effects can be offset when used in combination with adaptive humor styles. Consequently, a range of humor styles should be encouraged in our everyday lives, whilst still drawing attention to the potential negative implications of self-defeating and aggressive humor.

It is important to note that our research has relied on one conceptualization of humor – that of how we use humor in everyday life (or ‘humor styles’). Yet, it is important to recognise that there are many other ways of conceptualizing and measuring humor. Future research to disentangle the links between humor and friendship would benefit from an examination of humor production and appreciation among friends, as well as similarities and differences in the types of humor used such as sarcasm, physical (‘slapstick’), witty, observational etc.

Furthermore, many studies of humor styles have used cross-sectional designs. Those using longitudinal data have spanned a six-month period or less. However, such a short period of time may not always be sufficient to chart the changes under observation. We would argue that longitudinal data are needed to disentangle the issue of cause and effect. For example, does humor use impact on the development of friendships? Do friendships provide an important socialization context for the development of humor? Or does it work both ways, as we have identified in some of our research.

Finally, the research reviewed here has mostly been conducted in the West. As mentioned previously in this chapter, previous research has identified cultural differences in humor styles. For example, it was found that Chinese participants used less aggressive humor than Canadian participants, and that generally, Canadian participants used all four humor styles

more than the Chinese sample (Chen & Martin, 2007). These findings can be explained by differences in how cultures vary in terms of their emphasis on independence as opposed to interdependence – independence of the self *from* others (e.g. Europe and North American) or interdependence of self *with* others (e.g. parts of Asia). In interdependent cultures, individuals may be motivated to fit in and adjust to the needs and expectations of others in a relationship (Morling, Kitayama, & Miyamoto, 2002). This could extend to the avoidance of conflict in relationships. With these findings taken together, it is reasonable to assume that use of humor *within friendships* also differs across cultures. We would therefore expect to see different cross-cultural patterns in the use of humor across all of these different close relationships. It is therefore important that future research projects study the links between humor and friendship cross culturally.

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